



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/644,719

08/20/2003

Kenneth J. Fennewald

94004-88254

6120

28997

7590

03/10/2006

HARNESS, DICKEY, & PIERCE, P.L.C
7700 BONHOMME, STE 400
ST. LOUIS, MO 63105

EXAMINER

KASENGE, CHARLES R

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,719

Applicant(s)

FENNEWALD ET AL.

Examiner

Charles R. Kasenge

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-19 and 28-35 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 20, 24-26 and 36-44 is/are rejected.
- 7) ☒ Claim(s) 6, 21-23 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 7, 20, 24-26 and 36-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Cutler et al. U.S. Patent 6,039,702. Referring to claims 1, 36, 39, 40 and 41, Cutler discloses a control system that limits the wattage provided by a heat-producing element to a value less than that produced at full line voltage, the system comprising: at least one heat-producing means (col. 2, lines 2-5); a power control means operatively associated with said at least one heat-producing means (col. 2, lines 2-9); and a power limiting function that limits the wattage provided by said at least one heat-producing means to a value less than that produced at a full line voltage through the use of a scaling function (col. 2, lines 2-21 and col. 9, lines 13-39). Referring to claim 2, 24 and 42-44, Cutler discloses the control system according to claim 1 wherein said power limiting function and said scaling function resides in a module attached to

said at least one heat-producing means or operatively placed between said power control means and said at least one heat-producing means (Fig. 3).

Referring to claims 3-5, Cutler discloses the control system according to claim 1 wherein said power limiting function and said scaling function resides in a module operatively placed between a power source and said power control means (Fig. 3). Cutler discloses the control system according to claim 1 wherein said power limiting function and said scaling function resides in said power control means operatively placed between a power source and said at least one heat-producing means (Fig. 3). Cutler discloses the control system according to claim 1 wherein said power limiting function and said scaling function resides in a module operatively placed between the output of any control device and the control input to said power control means which controls said at least one heat-producing means (Fig. 3).

Referring to claims 7 and 20, Cutler discloses the control system according to claim 1 further comprising a temperature controller, said temperature controller including: a temperature sensing function such that a process temperature operatively associated with said at least one heat-producing means may be determined; a temperature comparison function for comparing a temperature associated with said at least one heat-producing means with a set point temperature and determining the required output; and an output function that provides, directly or through the use of an ancillary power control means, a method to vary the power supplied to the heat-producing means (col. 2, lines 22-33).

Referring to claims 25 and 26, Cutler discloses the variable wattage control system according to claim 20 wherein said power control means controls power level supplied to said heating-producing means by semiconductor power control or mechanical power switching means

Art Unit: 2125

(col. 9, lines 53-63). Cutler discloses the variable wattage control system according to claim 25 wherein said power control means controls power level supplied to said heat-producing means by phase angle control, burst firing, pulse mode, or pulse width modulation (col. 12, lines 52-56).

Referring to claims 37 and 38, Cutler implicitly discloses the control system according to claim 36 further comprising: at least one circuit protection device operatively associated with the power receiving device (col. 9, lines 33-36). Circuit breakers are common for temperature control systems. Cutler discloses the control system according to claim 36 further comprising at least one filtering device operatively associated with the power receiving device to suppress high frequency component generation (col. 7, lines 55-63)

Allowable Subject Matter

4. Claims are 8-19 and 28-35 are allowed.
5. Claims 6, 21-23 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

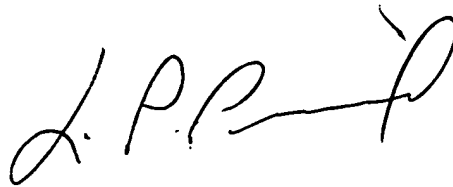
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles R. Kasenge whose telephone number is 571 272-3743. The examiner can normally be reached on Monday through Friday, 8:30 - 5 pm.

Art Unit: 2125

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CK
March 6, 2006

A handwritten signature in black ink, appearing to read 'L. Picard', with a stylized flourish at the end.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100